Mindfulness and Meditation-Based Relapse Prevention for Substance Use Disorders: A Forensic-Informed Clinical Study

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Abstract

Substance use relapse remains a significant challenge in recovery, driven by stress, craving, emotional dysregulation, and deficits in self-control. This study evaluates the efficacy of an 8-week mindfulness and meditation-based relapse prevention program designed to enhance self-regulation, reduce cravings, and improve coping strategies among individuals with substance use disorders (SUDs). Participants (N = 60) were randomly assigned to either the intervention group or a treatment-as-usual control group. Primary outcomes include relapse rates, days abstinent, and self-reported craving, while secondary outcomes assess mindfulness, emotional regulation, and treatment satisfaction. Data will be analyzed using repeated measures ANOVA and regression models. This study contributes to the literature by integrating contemplative practices with evidence-based relapse prevention strategies, providing a model for clinical and forensic applications, and offering thought-leader insight into mindfulness-based interventions for SUDs.

Introduction

Substance use disorders are chronic conditions characterized by cycles of abstinence and relapse, with high rates of recurrence even after successful treatment (Marlatt & Donovan, 2005). Relapse is often triggered by psychological stress, cravings, negative affect, and deficits in cognitive control, highlighting the need for interventions that address these mechanisms directly. Mindfulness and meditation-based interventions have gained increasing attention as complementary approaches in addiction recovery, offering strategies to increase self-awareness, reduce automatic responses to triggers, and cultivate adaptive coping skills (Bowen et al., 2014; Garland et al., 2019).

Mindfulness training has been associated with decreased substance use, enhanced emotion regulation, and improved executive functioning (Zgierska et al., 2009). By fostering present-moment awareness and non-judgmental observation of thoughts and cravings, mindfulness and meditation align with cognitive-behavioral principles widely applied in substance use treatment. Despite promising evidence, there remains a need for rigorous studies examining standardized mindfulness-based relapse prevention programs, particularly in populations with forensic or high-risk histories.

This study aims to fill this gap by evaluating the effects of an 8-week mindfulness and meditation based relapse prevention program. Specifically, the study investigates whether participation reduces relapse, enhances mindfulness skills, and improves coping strategies, providing clinically relevant insight into intervention mechanisms and outcomes.

Methods

Participants

Participants will include adults aged 18–65 with a diagnosed SUD, including alcohol, opioids, stimulants, or cannabis, recruited from outpatient treatment centers, community programs, and online support networks. Inclusion criteria require participants to be in early recovery or outpatient treatment, able to attend sessions, and provide informed consent. Exclusion criteria include active psychosis, cognitive impairment, or concurrent participation in another structured relapse prevention program. The target sample size of 60 participants allows for 30 individuals in the intervention group and 30 in the treatment-as-usual control group. Demographics such as age, gender, ethnicity, and baseline substance use patterns will be collected to examine potential covariates in the analysis.

Design and Procedure

The study employs a randomized controlled trial design. Eligible participants will be randomized to the intervention or control group. Baseline assessments will capture substance use, cravings, psychological functioning, and mindfulness. The intervention group will attend 8 weekly 90-minute sessions integrating meditation, mindfulness exercises, relapse prevention strategies, and reflective journaling. Homework exercises will reinforce skills. Follow-up

assessments will be conducted immediately post-treatment, at 1-month, and at 3-months post-intervention to assess sustainability.

Intervention and Therapist Role

The intervention is grounded in Mindfulness-Based Relapse Prevention (MBRP) principles and integrative addiction therapies. Each session includes guided meditation, mindfulness exercises, discussion of triggers, and coping strategies. Therapists are clinically trained in addiction, mindfulness, and group therapy, receiving ongoing supervision to maintain fidelity and participant safety.

Measures

Primary outcomes include relapse rates, days abstinent, and self-reported cravings, measured using the Timeline Followback (TLFB) and the Brief Substance Craving Scale (BSCS). Secondary outcomes include mindfulness skills (Five Facet Mindfulness Questionnaire), emotion regulation (Difficulties in Emotion Regulation Scale), and treatment satisfaction (Client Satisfaction Questionnaire). Session attendance, homework compliance, and participant engagement will also be tracked.

Statistical Analysis

Data will be analyzed using repeated measures ANOVA for group differences over time and regression models to examine predictors of relapse and mindfulness gains. Intention-to-treat

analysis will handle missing data and attrition. Effect sizes and significance values will be reported to provide clinically meaningful interpretations. Baseline group equivalence will be examined to confirm successful randomization.

Ethical Considerations

The study will follow IRB-approved protocols. Informed consent will be obtained, and participants can withdraw at any time. Data will be de-identified, stored securely, and therapists will receive supervision to ensure safety and ethical standards.

Anticipated Results

It is expected that participants in the mindfulness- and meditation-based relapse prevention group will demonstrate reduced relapse rates and increased days abstinent compared to the control group. Improvements in mindfulness, emotion regulation, and coping strategies are anticipated to mediate these outcomes. Participant satisfaction and adherence to homework exercises are expected to be high, reflecting feasibility and acceptability of the program. Example participants include “John,” a 32-year-old male recovering from opioid use, who reports reduced cravings and increased mindfulness after 6 weeks of guided meditation, and “Maria,” a 45-year-old female with alcohol use disorder, who successfully applies mindful coping strategies to high-risk situations. These case-based illustrations contextualize the clinical relevance of the intervention.

Discussion

Mindfulness and meditation-based interventions hold promise for addressing cognitive, emotional, and behavioral mechanisms driving relapse in SUD populations. This study integrates empirical and contemplative approaches, demonstrating how structured mindfulness practices can complement traditional relapse prevention strategies. Anticipated findings may inform clinical practice, supporting integration of mindfulness-based interventions in treatment planning, and highlight the utility of thought-leader-driven research in expanding evidence-based approaches for both general and forensic populations. Limitations include the moderate sample size and reliance on self-reported measures, and future research should explore long-term follow-up, diverse populations, and hybrid delivery formats.

References

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